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SECTION VII.—WEATHER AND DATA FOR THE MONTH.

THE WEATHER OF THE MONTH.

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PRESSURE.

The distribution of the mean atmospheric pressure over the United States and Canada, and the prevailing direction of the winds are graphically shown on Chart VII, while the average values for the month at the several stations, with the departures from the normal, are shown in Tables I and III.

For the month as a whole the barometric pressure was near or slightly below the normal over most sections east of the Mississippi River, except the upper Lake region, northern New England, and the Canadian Maritime Provinces. It was also low over the west Gulf States, the greater part of the Plateau region, and in the far Southwest. Over all other portions of the country average pressure was above normal, the greatest plus departures appearing in the eastern Rocky Mountain and western Plains regions.

The month opened with relatively high pressure over the northern portions of the country and to the westward of the Rocky Mountains. Elsewhere it was near the normal, except in the extreme Southeast moderately low pressure obtained. During the first decade the pressure continued high throughout most districts to westward of the Mississippi, while it was generally below the normal to the eastward. During the second decade relatively high pressure continued in most northern and western sections, while to the southward it was slightly below the normal until the latter part of the decade, when the movement of the subtropical storm across this region caused abnormally low pressure, which conditions continued until near the middle of the third decade. During the remainder of the month relatively high pressure prevailed generally throughout the Plains States and to the westward, while elsewhere the pressure was near the normal until the last few days of the month, when a rather extensive high area overspread most central and eastern districts.

The distribution of the highs and lows was generally favorable for southerly and southwesterly winds along the immediate Atlantic and Gulf coasts, except the Florida Peninsula, southwesterly in the upper Ohio Valley and lower Lake region, and northwesterly along the Pacific coast. Elsewhere variable winds prevailed.

TEMPERATURE.

The month opened with high temperatures over the more eastern and southern districts and with decidedly cool summer weather from the upper Lake region westward to the Rocky Mountains and over the northeastern

States. In other portions of the country the temperatures were near the normal. A cool wave gradually overspread the interior portions of the country and shortly after the middle of the first decade cooler weather extended into all districts to the eastward of the Rocky Mountains. During the latter part of the decade moderately cool weather prevailed in nearly all central and eastern districts with a tendency to warmer, and by the close of the decade normal summer temperatures were the rule in practically all parts of the country, except that unusually warm weather prevailed in some interior districts of the Pacific Coast and Plateau States.

The average temperatures for the decade were below the normal over much of the country to eastward of the Rocky Mountains, but along the South Atlantic and Gulf Coasts the decade was moderately warm, and to westward of the Rocky Mountains it was likewise above normal.

During the first few days of the week ending August 17 high temperatures prevailed over the interior portions of the far West, but as the week advanced there was a slight lowering, so that toward the end temperatures in those districts were near the normal. Over the districts to the eastward of the Rocky Mountains the week opened with moderate summer temperatures in nearly all portions and only slight changes occurred thereafter, except locally, due to the influence of thunderstorms or otherwise. Toward the latter part of the week slightly cooler weather occurred along the northern border and in portions of the mountain regions of the West, and by the end of the week much colder weather prevailed in the upper Lake region and to the eastward and the westward. Over other portions of the country the week closed with temperatures generally near the normal.

The mean temperatures for the week were equal to or above the seasonal normal in the northern Plains States and upper Mississippi Valley, and the week was generally warm over the eastern third of the country, as well as over the middle and northern Plateau and Pacific States. However, in the middle portions of the Plains region and Mississippi Valley the week continued cool.

The week ending August 24, opened with temperatures ranging from 5 degrees to 15 degrees below the seasonal average over northern districts from the Mississippi River eastward. As the week advanced there was a slight warming up, and shortly after the middle temperatures had become decidedly higher in the Middle Atlantic States and the upper drainage area of the Ohio River, but over interior districts comparatively cool weather for the season continued. During the latter part of the week moderate temperatures obtained over nearly all districts, while to the westward of the Rocky Mountains warm weather prevailed quite generally throughout the week. At the close considerably cooler weather overspread the Northwest, and light frosts were reported from points in North Dakota and Wyoming.

For the week as a whole, the average temperatures were below the normal over most sections east of the Rocky Mountains, save in the coastal portions of the New England, South Atlantic, and Gulf States, where they were near or slightly above the normal. To the westward of the Rocky Mountains the temperatures were likewise above the normal.

During the first few days of the last week of the month cool weather extended from the Missouri Valley southward to the Atlantic Coast. With only a slight interval of warmer weather following, a second cool wave appeared in the Northwest and moved rapidly eastward along the northern boundary with low temperatures and local frosts, reaching the Atlantic Coast shortly after the middle of the week. At the same time, another cool wave moved into the lower Missouri Valley with temperatures from 10 degrees to 20 degrees or more below the seasonal average and frosts occurred in many localities. Over the districts to the westward of the Rocky Mountains the weather generally was warmer than the average. In the South also temperature changes were moderate, but there was a tendency to cooler weather as the week advanced. At the close of the week there was a further fall in temperature over nearly all eastern districts and record breaking low temperatures for August occurred at many points. In the Northwest the weather was warmer and it continued warm in the far West.

The mean temperatures for the week were very generally the lowest for the summer over much of the great cereal and grass producing sections. To the westward of the Rocky Mountains they were above the normal, the greatest positive departures being about 10° as compared with negative departures of about the same value in the coldest districts to the eastward of the Rocky Mountains.

PRECIPITATION.

Generally stormy conditions prevailed over the eastern districts at the beginning of the month, and during the early part of the first decade heavy rains were general in the Lake region and over the Atlantic Coast States from the Carolinas northward to southern New England. High winds and heavy rains did considerable damage to crops over the Atlantic Coast States, while at points in the Lake region heavy rains caused much damage to property, notably at Erie, Pa., where, in addition to large property loss by flood, a score or more of persons were drowned. Rain continued locally at intervals over the districts from the Lake region and Ohio Valley eastward

for several days. During the latter part of the decade local showers occurred at widely scattered points over the interior and southern districts, and from the Great Lakes and upper Ohio Valley eastward to the Atlantic, and the southern portions of the Rocky Mountain and Plains regions. The decade closed with showers quite generally from the middle Plains region and central Texas eastward to the Atlantic and thence northward to New England. Over most northern and western districts fair weather prevailed.

For the decade as a whole the rainfall was comparatively light throughout the country, save for generous falls in the Atlantic coast districts and comparatively heavy amounts in the region of the Great Lakes and in portions of Kansas, Oklahoma, and Missouri.

During the first few days of the week ending August 17 showers occurred over most eastern districts, with some heavy local falls in the Central Gulf States and Ohio Valley. By the middle of the week high winds and showers set in over the Florida Peninsula, and during the remainder of the week showers were quite general in the Gulf States, with heavy falls and considerable property damage in portions of Texas, due to the severe West Indian disturbance, the first of the season. At the close of the week showers were general also from the central Missouri and lower Ohio valleys eastward to New England, and there were local showers in the Northwestern States, but in the Central West and Southwest fair weather prevailed. East of the Rocky Mountains the rainfall for the week was generally sufficient for present needs, and in the central and east Gulf States the drouthy conditions were largely relieved by substantial showers. To the westward of the Rocky Mountains practically no rain occurred.

The tropical storm referred to above, a full description of which appears elsewhere in this REVIEW, made little progress during the first few days of the week ending August 24, and rain occurred quite generally over nearly all districts from the middle Plains States and central Texas eastward, with heavy falls in portions of the west Gulf States and the central Mississippi Valley. By the middle of the week the rain area had covered most eastern districts with large daily amounts in some sections, particularly in portions of the Ohio and middle Mississippi Valleys. By the end of the week the weather had generally cleared to the eastward of the Mississippi, while local rains were in evidence in the Northern and middle Plains States and upper Mississippi Valley. In portions of the central and southern Mississippi and lower Ohio valleys,

the total rainfall for the week was excessive, ranging from 4 to 8 inches or more, while in most districts to the eastward generous showers occurred, especially in the central Gulf States, where moisture was needed. The amounts for the week were light in the Middle Atlantic States and over the spring-wheat belt, while in extreme southern Texas, much of the Florida Peninsula, and to the westward of the Rocky Mountains practically no rain occurred.

In addition to the great loss of life and damage to property resulting from the high winds and torrential rains along the Texas coast, and to a considerable distance inland, serious flood damage occurred in the central Mississippi and lower Ohio valleys, especially at St. Louis, Mo., and vicinity.

No well-defined rain area crossed the country during the last week of the month, although considerable precipitation fell. Fairly general rains occurred over the Atlantic coast States near the middle of the week, and local heavy falls occurred in Texas. Toward the end of the week rains became rather general over the districts to the eastward of the Mississippi, but by the close the weather had cleared in nearly all parts of the country. Only light showers occurred in the districts between the Mississippi River and Rocky Mountains, except in Texas and portions of the immediate Mississippi Valley, while in the far West the week was practically rainless.

For the week as a whole the rainfall was generally light, except over much of Texas, portions of the middle Mississippi Valley, and most of the Atlantic coast districts, where generous amounts occurred.

GENERAL SUMMARY.

The weather for August, 1915, was characterized by almost continuously low temperatures over large portions of the great cereal and grass growing States, the accumulated daily deficiency since the middle of May exceeding that of any previous similar period in the past 40 years.

Rain fell over practically all portions of the country, except the western half of California, northeastern Nevada, and the northwestern portions of Oregon and Utah. The rainfall was heavy in portions of the west Gulf States, central Mississippi and lower Ohio valleys, portions of the Middle and South Atlantic States, and the central Florida Peninsula.

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Average accumulated departures for August, 1915.

Districts.	Temperature.			Precipitation.			Cloudiness.		Relative humidity.	
	General mean for the current month.	Departure for the current month.	Accumulated departure since Jan. 1.	General mean for the current month.	Departure for the current month.	Accumulated departure since Jan. 1.	General mean for the current month.	Departure from the normal.	General mean for the current month.	Departure from the normal.
	° F.	° F.	° F.	In.	In.	In.	0-10		P. ct.	P. ct.
New England.....	66.1	-1.0	+6.3	5.23	+1.10	-1.10	6.3	+1.3	83	+1
Middle Atlantic.....	71.9	-0.9	+4.3	6.39	+1.80	+0.50	6.0	+0.9	78	+7
South Atlantic.....	78.0	-1.1	+2.4	6.14	0.00	-4.00	6.1	+0.9	80	+2
Florida Peninsula.....	83.2	+1.3	+9.1	3.73	-3.20	-0.70	4.9	-0.3	75	+4
East Gulf.....	80.0	+0.8	+2.2	4.61	-0.39	-4.00	5.9	+0.7	78	+2
West Gulf.....	78.8	-2.2	-7.6	8.76	+5.80	+4.00	5.8	+1.8	77	+2
Ohio Valley and Tennessee.....	70.6	-4.1	-7.6	5.96	+2.50	-2.70	6.5	+2.0	80	+8
Lower Lakes.....	66.3	-3.3	-5.3	4.67	+1.70	-0.80	6.2	+1.6	80	+9
Upper Lakes.....	62.7	-3.5	+2.3	3.74	+0.80	-1.50	5.3	+0.6	78	+3
North Dakota.....	65.4	-1.3	+10.0	1.48	-0.80	-1.10	2.3	-1.7	70	+6
Upper Mississippi Valley.....	67.2	-5.8	-4.4	4.48	+1.20	+4.60	5.6	+1.4	78	+8
Missouri Valley.....	68.0	-5.8	-8.4	3.44	-0.10	+7.70	4.8	+0.7	76	+9
Northern slope.....	66.7	0.0	+1.2	2.07	+0.80	+3.90	4.2	+0.3	65	+13
Middle slope.....	69.8	-5.4	-12.5	3.90	+1.50	+6.60	4.6	+0.8	73	+14
Southern slope.....	76.5	-2.6	-12.1	3.47	+1.30	+2.80	4.0	+0.1	66	+5
Southern plateau.....	77.0	-0.3	-15.8	0.62	-0.50	+1.50	2.6	-1.1	44	+2
Middle plateau.....	73.5	+1.9	-1.5	0.18	-0.66	-0.60	1.9	-1.4	29	-4
Northern plateau.....	76.0	+5.6	+14.5	0.07	-0.30	+0.30	2.5	+0.2	36	-7
North Pacific.....	64.4	+3.4	+10.4	0.17	-1.40	-6.10	4.4	-0.2	73	+6
Middle Pacific.....	67.2	+2.3	+6.7	0.01	0.00	+4.70	2.9	-0.7	60	-7
South Pacific.....	72.7	+2.2	+10.2	0.00	0.00	+3.90	1.8	-1.0	66	0

Maximum wind velocities, August, 1915.

Stations.	Date.	Velocity.	Direction.	Stations.	Date.	Velocity.	Direction.
		Mi/hr.				Mi/hr.	
Charlotte, N. C....	29	52	w.	New York, N. Y....	4	64	se.
Columbus, Ohio....	24	64	nw.	Norfolk, Va.....	16	50	sw.
Del Rio, Tex.....	13	52	ne.	Point Reyes Light, Cal.....	3	52	nw.
Galveston, Tex....	16	85	ne.	Do.....	5	50	nw.
Do.....	17	93	e.	Do.....	6	50	nw.
Houston, Tex.....	16	58	ne.	Do.....	7	54	nw.
Do.....	17	80	se.	Do.....	10	60	nw.
Jacksonville, Fla..	2	54	s.	Do.....	12	57	nw.
Mount Tamalpais, Cal.....	2	66	n.	Do.....	13	53	nw.
Do.....	3	69	n.	Do.....	31	53	nw.
Do.....	5	55	nw.	Richmond, Va.....	1	55	nw.
Do.....	6	64	nw.	San Antonio, Tex..	17	60	n.
Do.....	7	57	nw.	Sandy Hook, N. Y..	4	54	e.
Do.....	10	53	nw.	San Juan, P. R....	11	60	ne.
Do.....	12	52	nw.	Sand Key, Fla.....	13	50	e.
Do.....	28	54	nw.	Do.....	14	60	se.
Do.....	29	63	nw.	Taylor, Tex.....	17	54	n.
Do.....	30	51	nw.				
Do.....	31	53	nw.				